

WHAT IS CLAIMED IS:

1. A semiconductor device having a lead electrode connected to a lead, a case electrode having a projection part around its periphery, and a semiconductor chip having a rectification function and connected electrically between said lead electrode and said case electrode through connection members, wherein an electrically conductive plate is provided between said semiconductor chip and said lead electrode.
2. A semiconductor device according to claim 1, wherein the coefficient of linear expansion of said electrically conductive plate is smaller than that of said case electrode and also is equal to or larger than 50 % of that of said semiconductor chip.
3. A semiconductor according to claim 1, wherein the strength of said electrically conductive plate is larger than that of said case electrode.
4. A semiconductor device according to claim 1, wherein said case electrode has a layer structure having a metal containing copper through a metal containing iron.
5. A semiconductor device according to claim 1, wherein said electrically conductive plate has a layer structure of copper-iron alloy-copper, and the iron alloy containing a 30 % to 50 % with Ni remainder Fe or a 20 % to 40 % Ni-50 % to 60 % with Fe remainder Co.
6. A semiconductor device according to claim 1, wherein said electrically conductive plate is made of

an iron alloy containing a 30 % to 50 % with Ni remainder Fe or a 20 % to 40 % Ni-50 % to 60 % with Fe remainder Co.

7. A semiconductor device according to claim 1, wherein said electrically conductive plate is an electrically conductive plate made of Mo as a main constituent element and having a thickness equal to or larger than 100 % of that of said semiconductor chip.

8. A semiconductor device according to claim 1, wherein said electrically conductive plate is an electrically conductive plate made of W as a main constituent element and having a thickness equal to or larger than 100 % of that of said semiconductor chip.

9. A semiconductor device having a lead electrode connected to a lead, a case electrode having a projection part around its periphery, and a semiconductor chip having a rectification function and connected electrically between said lead electrode and said case electrode through connection members, wherein an electrically conductive plate is provided between said semiconductor chip and said lead electrode, and a width of said electrically conductive plate is equal to or smaller than 90 % and equal to or larger than 50 % of that of said semiconductor chip.

10. A semiconductor device having a lead electrode connected to a lead, a case electrode having a projection part around its periphery, and a semiconductor chip having a rectification function and

connected electrically between said lead electrode and said case electrode through a solder, wherein an electrically conductive plate is provided between said semiconductor chip and said lead electrode, no electrically conductive plate is provided between said semiconductor chip and said case electrode, and each width of said lead electrode and said electrically conductive plate is smaller than that of said semiconductor chip, and the solder between said semiconductor chip and said electrically conductive plate is formed in such a way that a width of the side end of said semiconductor chip is smaller than that of the side end of said electrically conductive plate.

11. A semiconductor device having a lead electrode connected to a lead, a case electrode having a projection part around its periphery, and a semiconductor chip having a rectification function and connected electrically between said lead electrode and said case electrode through a solder, wherein an electrically conductive plate is provided between said semiconductor chip and said lead terminal, no electrically conductive plate is provided between said semiconductor chip and said case electrode, and each width of said lead electrode and said electrically conductive plate is smaller than that of said semiconductor chip, and the solder between said semiconductor chip and said electrically conductive plate is formed in such a way that a width of the side

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